

REMARKS

Applicant appreciates the attention of the Examiner to the application. The Office Action of the Examiner of June 30, 2005 has been reviewed with care in the preparation of this response. The amendment above and the following remarks are believed to be fully responsive to this action.

Status of Claims

Claims 1-19 are pending. The pending claims set forth a novel and non-obvious impact-absorbing level and method of providing impact-absorption to a level. Allowance of all pending claims is respectfully requested in view of the above amendment and the following remarks.

Claims 9, 12, 17 and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Krehel et al. (U.S. Patent No. 6,792,686). Claims 1-5, 7-8, 10-11, 13-16 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Krehel. Claim 6 was objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form. Claim 2 was objected to because of a minor informality.

The amendment above amends claims 1-2, 4, 7, 9-10, 12, 13, 15-19 and adds claims 20-22. The informality in claim 2 has been corrected. Claims 6, 11 and 14 have been cancelled. The amendment is fully supported by the specification to the application and does not include any new matter. The pending claims, as amended, are not rendered unpatentable by the references cited by the Examiner but are patentably distinguishable over such prior art.

Applicant now turns to the particular points raised by the rejections in the Office Action of June 30, 2005.

Rejection of Claims 9, 12 and 17-18 under 35 U.S.C. §102(e)

Claims 9, 12, 17 and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by Krehel. Claims 9 and 17 are independent claims. Applicant respectfully traverses the rejections of each of these claims, as amended, and asks that they be withdrawn.

Claim 9 has been amended to clarify the patentability of Applicant's novel invention. Claim 9, as amended, requires at least that end caps have outer and intermediate layers contiguous with each other, the outer layer being positioned most distal from the respective end. Claim 9 also requires that the intermediate layer have lower density than the outer layer. This novel structure is missing from Krehel. Anticipation requires that the identical invention to that contained in a claim be described in a single prior art reference. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ 2d 1913 (Fed. Cir. 1989).

Krehel does not disclose an end cap where impact results in compression of its intermediate layer. End member 14 in the cited reference is instead a structure having an intermediate layer or "inner core" of relatively hard material and an outer layer of elastomeric material. It is this outer or elastomeric layer that provides the end member with its shock absorption function. (Krehel at col. 7, lines 11-32). In addition, there is no teaching of any kind with respect to the densities of these two layers, much less whether the hard polypropylene of the intermediate layer has less density than the thermoplastic elastomer of the outer layer.

The Examiner points to wall stand off members 66 along with the exterior surface of end portion 62 in Krehel as constituting its outer layer while the surface lining the peg receiving opening 64 is its intermediate layer. (Applicant thanks the Examiner for clarifying in a phone conversation on September 27, 2005 the specific structures on the end member in Krehel being pointed out in the Office Action as disclosing these layers.) The exterior surface of end member 14 is, however, formed from the same elastomeric material that defines the peg receiving opening and both structures are either parts of the same layer or separated by a portion of the inner core and therefore not contiguous with each other. (Krehel at FIG. 6; col. 7, lines 25-32). In either situation, both layers would have the same density having been formed from the same material.

Absent these features, the improved impact-absorbing end cap described in amended claim 9 is not anticipated by Krehel. Claims 10, 12-13 and 15-16 are dependent from claim 9. Applicant respectfully asks that amended claim 9 and each of the claims that depend from it now be allowed.

Claim 12, as amended, adds the limitation that the end caps each also include an inner layer connecting the intermediate layer to the body and non-contiguous with the outer layer. This claim is allowable at least by virtue of its dependency from amended claim 9. No inner layer is, however, disclosed in Krehel. The Examiner points to the projecting portion 74 of the end member as its inner layer but this feature is no more than an extension of the structure's intermediate layer or hard inner core. (Krehel at col. 7, lines 48-56). Even if the surface surrounding the peg receiving opening constitutes its intermediate layer, the inner core of the end member in Krehel still fails to teach an inner layer that is not contiguous with the member's outer layer. (Krehel at FIG. 6).

For these additional reasons, Applicant believes that the specific rejection of amended claim 12 has been traversed and that it and any claims depending from it are now in position for allowance.

Independent claim 17 is a method claim directed to providing impact-absorption to a level. Claim 18 is dependent to it. Claim 17, as amended, requires at least adhering an end cap to each end of the level where each end cap has outer and intermediate layers, the outer layer secured to and having a greater density than the intermediate layer. The outer layer moves toward the respective end during impact to the end cap due to compression of the intermediate layer. For the reasons stated above with respect to the allowance of amended claim 9, the intermediate layer pointed out by the Examiner in Krehel is not secured to the outer elastomeric surface of the end member but separated from it by a portion of the structure's inner core as shown in FIG. 6. Moreover, both such layers have identical density being formed from the same material. Since there are elements not described or disclosed by Krehel, claim 17, as amended, should be allowed.

Claim 18, as amended, adds the limitation that each end cap further includes an inner layer that abuts the respective end of the level where the intermediate layer is spaced apart from the body of the level by the inner layer and the outer layer is spaced apart from the inner layer by the intermediate layer. This claim is allowable at least by virtue of its dependency from claim 17. In addition, however, as pointed out with respect to the allowance of amended claim 12, no inner

layer is disclosed by Krehel. Even if the inner core of the end member in that reference would be considered to teach an inner layer, that feature is not spaced apart from the end member's outer layer by the peg opening but abuts the member's outer layer and defines the peg opening. Since the added limitation in amended claim 18 is neither taught nor shown in Krehel, Applicant submits that claim 18, as amended, is not anticipated under 35 U.S.C. §102(e) and that this claim and any claim depending from it be allowed.

Rejection of Claims 1-5, 7-8, 10-11, 13-16 and 19 under 35 U.S.C. §103(a)

Claim 1 is an independent claim and has claims 2-5 and 7-8 depending from it. As amended, claim 1 is directed at least to a first end cap comprising an impact-resisting outer layer and an impact-compressing intermediate layer, the intermediate layer being fixed to the outer layer and the body of a level and having lower density than the outer layer. Claim 1, as amended, is not rendered obvious by Krehel but is instead patentably distinguishable over such prior art.

Any combination or modification of the prior art to establish obviousness must teach or suggest each and every one of the limitations set forth in the claim being rejected. MPEP §2143.03. The Examiner points to the peg receiving opening in Krehel with its elastomeric wall as teaching an intermediate layer. This intermediate layer in Krehel is not, however, fixed to the exterior surface of the end member comprising the outer layer. Absent this feature, the rejection of amended claim 1 is traversed.

The Examiner also acknowledges that Krehel does not teach or suggest an intermediate layer of an end cap that has lower density than an outer layer. Although the Examiner states that Krehel does disclose an end cap having layers with different densities, this is only a supposition of hers based on the fact that the layers are made from different materials – FIG. 6 is completely silent on the matter of density.

In support of a prima facie case of obviousness under 35 U.S.C. §103(a), the Examiner simply states that it would have been obvious to one having ordinary skill in the art to provide an end cap with an intermediate layer having lower density than its outer or inner layers. She cites In re Aller, 42 CCPA 824, 105 USPQ 233 (1955) in support of the proposition that where the

general conditions of a claim are disclosed in the prior art, experimentation to discover the “optimum range” involves only routine skill in the art. From this proposition, the Examiner proceeds to argue that claim 1 is unpatentable since it would be within the general skill of a worker in the art to change the density of the intermediate layer in an end cap to suit the needs of its user.

The Examiner’s reliance, however, on the decision in In re Aller is misplaced. Obviousness under 35 U.S.C. §103(a) can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Jones, 958 F.2d 347 (Fed. Cir. 1992). There must be more of a justification for modifying a piece of prior art than solely the fact that the particular reference happened to have been known at the time of the invention. The mere fact that a reference can somehow be modified to arrive at a claimed invention does not render the resultant modification obvious unless the prior art had also clearly suggested the desirability of this modification. MPEP §2143.01.

There is no showing in the present Office Action, however, of any reasons or motivation within Krehel to support the manner of modification of that reference that the Examiner must rely upon for her rejection of claim 1. A specific and objective explanation why a skilled artisan would have been motivated to make a claimed modification must be set forth by an examiner after any rejection under 35 U.S.C. §103. MPEP §706.02(j). The Examiner in the Office Action simply calls upon the supposed level of skill of one skilled in the art to provide the necessary motivation for the selection and modification of Krehel for making the changes in the structure of the prior art required by the claim. This subjective showing is not the one required under the MPEP but rather an exercise in hindsight frowned upon by the courts. An examiner may not simply select from the prior art the needed components of a claimed invention and then modify them through the use of the blueprint supplied by the inventor. Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985).

Moreover, the ruling in In re Aller is far more limited than the broad authority attributed to it by the Examiner. Appellant in that decision claimed a chemical process that could be arrived at by experimentally varying the temperature and concentration of a component in a process disclosed in the prior art. Krehel is not directed to a chemical process where routine variation in the factors of the process to achieve the range needed for optimal production is expected. That reference simply teaches an end member constructed to include a soft outer layer so as to provide shock absorption distal to a hard polymeric inner core. The end cap claimed in amended claim 1 with an impact-resisting outer layer and an impact-compressing intermediate layer for enhanced impact-absorption is different in kind from any taught or suggested in Krehel.

The Examiner must make an objective showing to sustain a rejection based on 35 U.S.C. §103 that the invention of the Applicant would have been obvious to one skilled in the art with no more than Krehel in front of them. The “general conditions” of the limitations in claim 1 are not disclosed in Krehel. Nothing is stated in the reference with respect to the concept of dual density layers, much less an intermediate layer having a lower density than the outer layer. While Krehel arguably teaches layers in an end cap having differing hardness, this is not a teaching of density since greater hardness does not always correlate with greater density, i.e., the contrast between wood and rubber.

In addition, Krehel teaches against modifying its end member in the manner suggested by the Examiner in order to arrive at the claimed end cap. Other than relying upon the present application in guiding such modification, there is no teaching or suggestion in Krehel to ever support transforming its end member’s outer layer from one that is impact-compressing as disclosed in the reference to one that is impact-resisting. In the alternative, there is certainly neither any motivation taught by Krehel for the removal of the elastomeric exterior surface from the end portion to expose the inner core as the impact-resisting element and to leave the peg receiving opening as the impact-compressing intermediate layer.

Moreover, in the event the inner core is viewed as comprising the intermediate layer to the Krehel end member, having the inner core serve as a compressible layer would require that it be formed from a different material than the hard plastic that is taught by this reference. This

would make the structure highly unsatisfactory for its obviously intended purposes. In particular, transforming this portion of the end member into an impact-compressing layer would defeat the ability of the transverse projections 82 on the elements extending outward from the projecting portion of the inner core to be firmly received within their corresponding openings 58 on the level's central wall when the end member is secured to the level to, thereby avoiding later detachment.

For each of these specific reasons, Applicant believes that the rejection of amended claim 1 should be withdrawn and asks that it and all of its dependent claims now be allowed.

Claim 4 is dependent to claim 1 and, as amended, requires the first end cap to include an impact-resisting inner layer having a higher density than the intermediate layer. For reasons set forth earlier with respect to the allowance of amended claim 12, Krehel fails to teach an inner layer to its end member having these features. Applicant submits that no inner layer is disclosed in Krehel. Although the Examiner points to the projecting portion of the end member as being its inner layer, this feature is, however, no more than an extension of the structure's intermediate layer or hard inner core. Even if the peg receiving opening and its surrounding surface constitutes the end member's intermediate layer, there is no showing by the Examiner in the Office Action of any teaching, suggestion or motivation in Krehel for one skilled in the art to have provided an inner layer with higher density than this intermediate layer. For these additional reasons, Applicant requests that the specific rejection of amended claim 4 and any claim dependent to it be withdrawn.

Claim 7, as amended, is also dependent to claim 1. This claim adds the limitation that the intermediate layer define a rippled profile where the layer includes portions matching the body profile spaced apart by portions smaller than the body profile. There is no teaching, suggestion or motivation in Krehel of this limitation. While the inner core of the end member in the reference presents a varying profile, there are no two portions of this structure matching the body profile of the level at either end, much less such portions separated by other portions of this layer having smaller profiles. With the peg receiving opening in Krehel as the intermediate layer, there is no portion matching the body profile. In addition, given the presence of the stand off members

extending out from the sides of the elastomeric outer wall of the end member, the disclosed outer layer in Krehel also fails to define an outer profile matching the body profile. Applicant respectfully asks therefore that the specific rejection of amended claim 7 also be withdrawn.

Claim 8, as amended, requires that the first end cap be adhered to the body of the level. This limitation is also missing from Krehel. The Examiner makes reference to FIG. 6 in that reference in support of her rejection. This drawing offers no teaching or disclosure, however, as to the manner by which the end member is secured to the wall frame structure of the level. As discussed in some detail earlier, the end members in Krehel are “constructed and arranged to cooperate with the configuration of the thin wall frame structure 12 so as to be fixedly secured in closing relation with respect to the associated end of the thin wall frame structure 12.” (Krehel at col. 5, lines 57-61). On this basis, Applicant believes that amended claim 8 should be specifically allowed.

Claim 10, as amended, is allowable at least by virtue of its dependency from amended claim 9. In addition, however, it includes the requirement that the intermediate layers of the end caps compress more easily than the outer layers. Although the Examiner points to Krehel as disclosing this limitation, the intermediate layer of the end members in that reference are formed from hard plastic and are far less compressible than the outer layer of these devices. To the extent that the peg receiving opening of the Krehel end member constitutes an intermediate layer, there is still no teaching or suggestion in that reference directed to that “layer” compressing more easily than the elastomeric exterior surface. The extent of any teachings within Krehel directed to the compressibility of the outer and intermediate layers of its end members were discussed in more detail previously with respect to the allowance of amended claim 9. For all of these reasons, Applicant requests that the specific rejection of amended claim 10 also be withdrawn.

Claim 13 adds the limitation that the intermediate layers have densities lower than both the inner and outer layers. Claim 13 is allowable at least by virtue of its dependency from amended claims 9 and 12. In addition, however, for reasons set forth above with respect to the allowance of amended claims 4 and 9 as directed to the requirement in claim 4 that the intermediate layer have a lower density than the inner layer and in claim 9 that the intermediate

layer have a lower density than the outer layer, Krehel specifically fails to teach or suggest this limitation as well. Applicant asks therefore that amended claim 13 and each of its dependent claims be allowed.

Claim 15, as amended, at least requires that the intermediate layers define rippled profiles where portions match the body profile and are spaced apart by portions smaller than the body profile. For each of the reasons set forth with respect to the allowance of amended claim 7, Krehel fails to teach or suggest this limitation. Applicant respectfully asks, therefore, that the rejection of amended claim 15 be specifically withdrawn.

Claim 16, as amended, recites the limitation that the inner layer of each end cap be bonded to its respective end. For reasons stated in support of the allowance of claim 8, Krehel offers no teaching or disclosure, however, as to the manner by which the end member is secured to the wall frame structure of its level. Applicant believes that the specific rejection of claim 16 has been traversed and that claim 16, as amended, should be allowed.

New Claims

Applicant appreciates the indication of allowable subject matter in claim 6. Claim 20 is a new independent claim comprising the limitations of claim 6, now cancelled, and specific limitations drawn from claim 1 and the intervening claims to which claim 6 is dependent.

Claims 21, 22 and 23 are dependent to amended independent claim 1. These claims are allowable at least by virtue of such dependency for the reasons set forth above with respect to the allowability of amended claim 1. Claim 21 recites the requirement that each layer of the first end cap have at least one surface coplanar with the level face. Claim 22 is dependent to claim 4 and adds the limitation that the first end cap extend outward from the first end to the outer layer and that each of the layers of the first end cap be in longitudinal alignment with the outer layer being spaced apart from and non-contiguous with the inner layer. Claim 23 is also dependent to claim 4 and further requires that each layer be monolithic.

Each new claim is not anticipated or made obvious by any of the references cited by the Examiner. Each is in condition for immediate allowance.

Conclusion

Applicant's invention, as set forth in the pending claims, represents a novel level having highly desirable impact-absorbing end caps. Applicant believes these claims have elements not disclosed or suggested in the prior art. Applicant submits that all rejections in the Office Action have been traversed by amendment and argument, placing the application in condition for allowance. In addition, newly added claims 20-23 are patentably distinguishable over the prior art cited. Early favorable action is earnestly solicited. The Examiner is invited to call the undersigned if such would be helpful in resolving any issues that might remain.

If any extension fee is due, please debit Deposit Account 10-0270 and inform the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard W. White". The signature is fluid and cursive, with a large initial "R" and "W".

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